

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

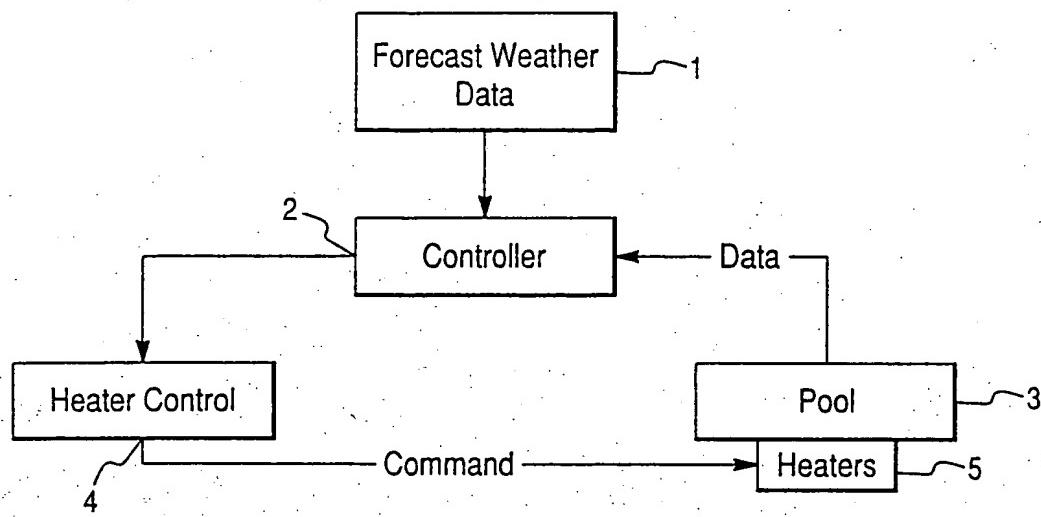
**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



1/14

Fig. 1





2/14

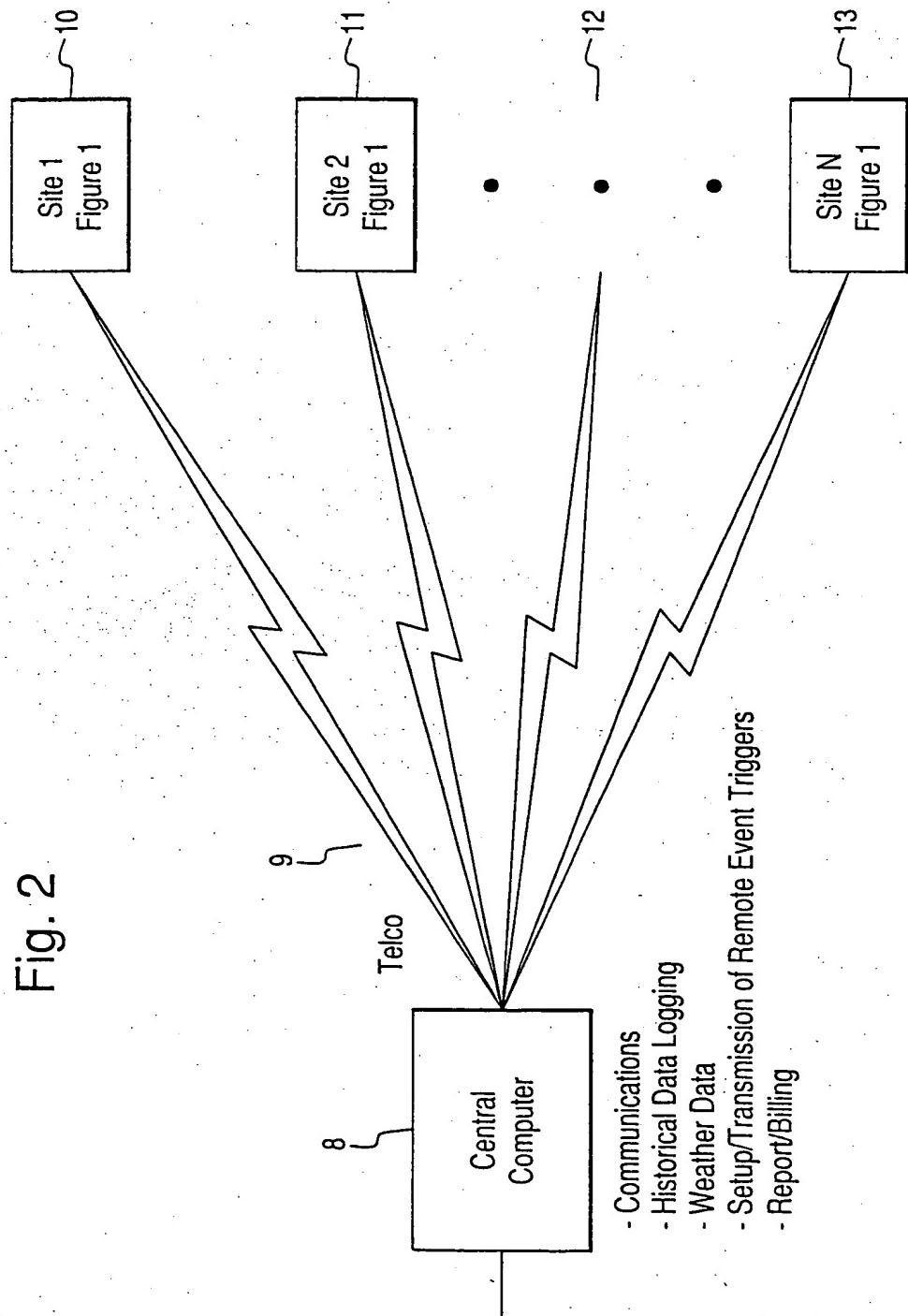
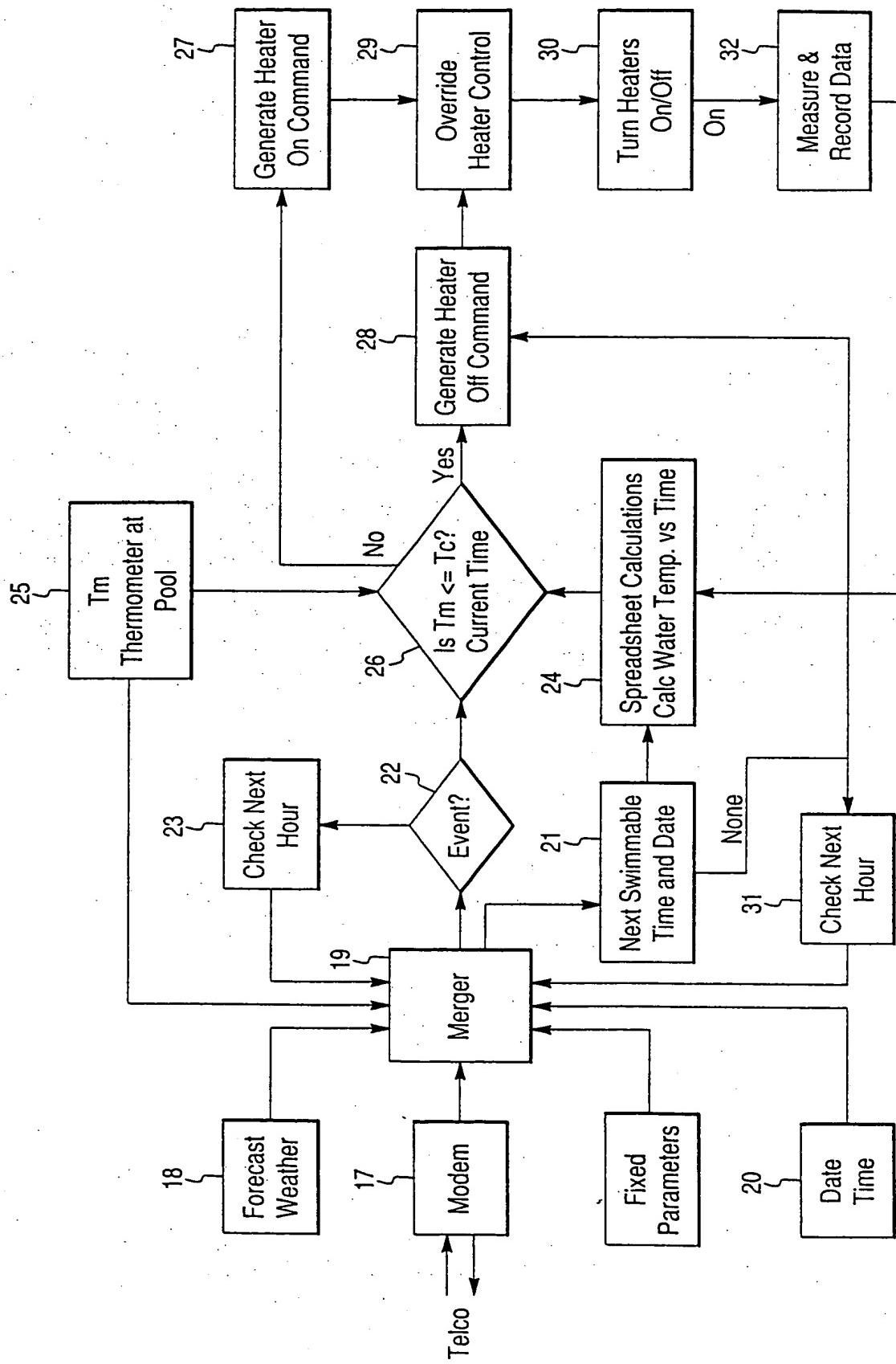


Fig. 2



3/14

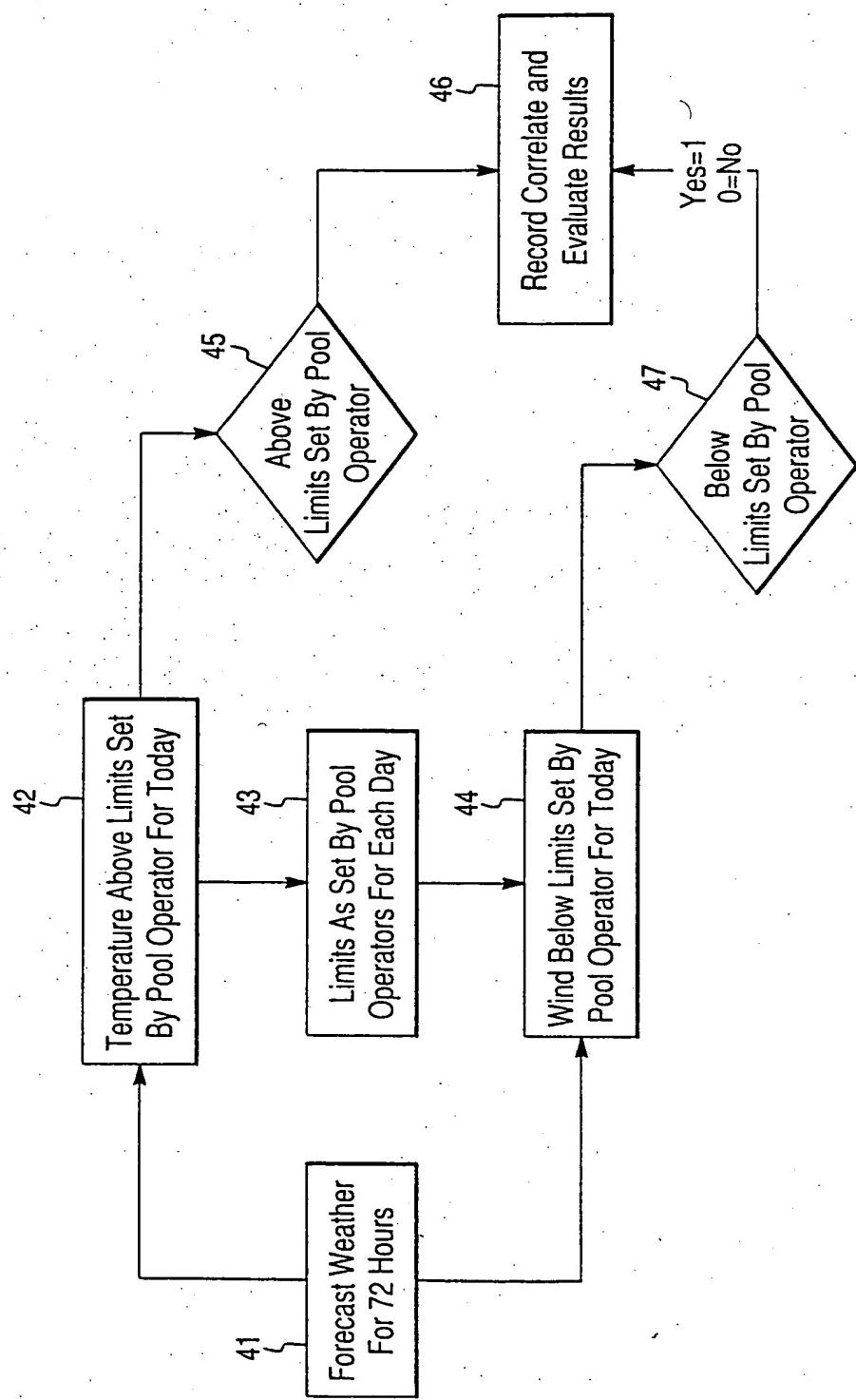
Fig. 3





4/14

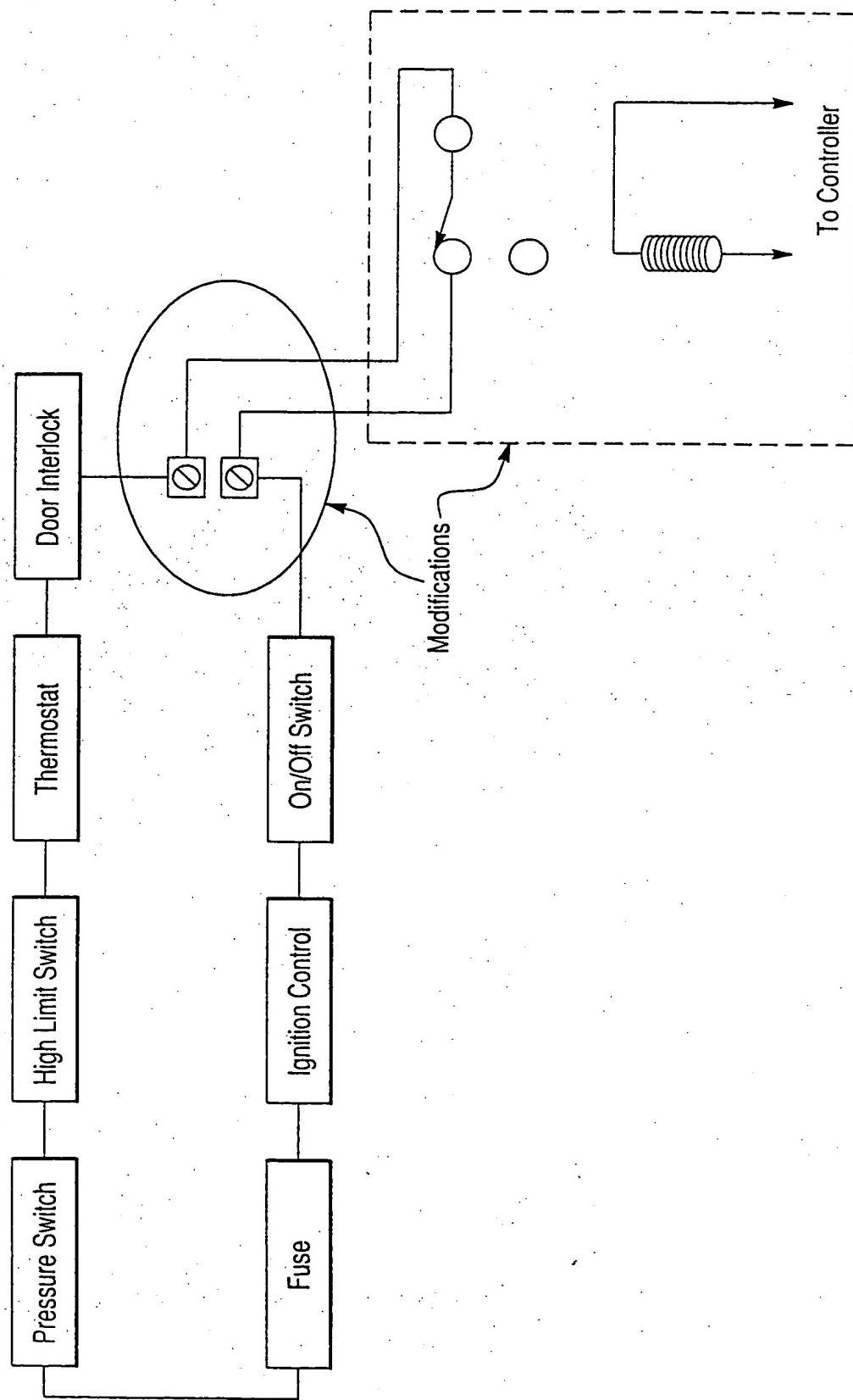
Fig. 4





5/14

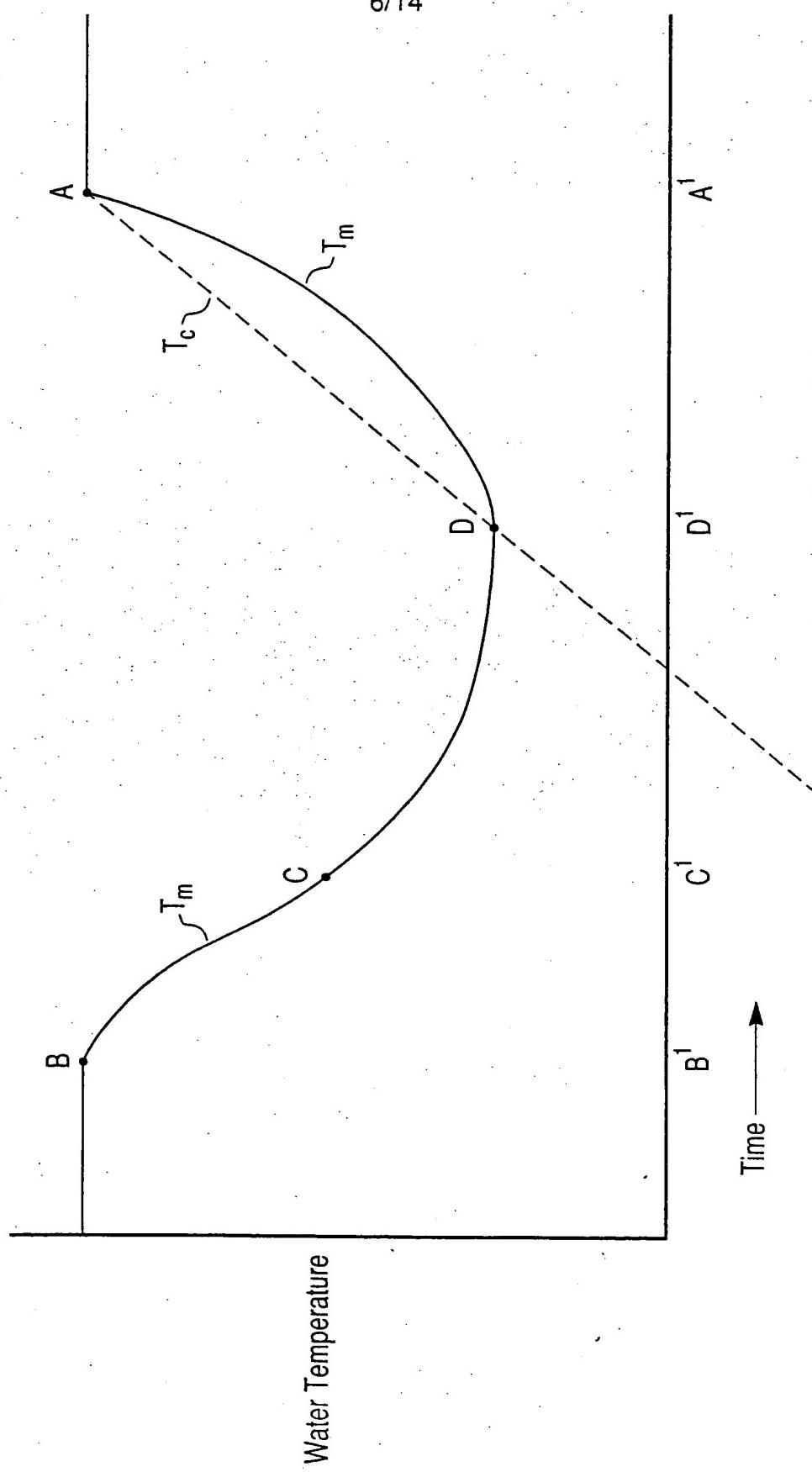
Fig. 5





6/14

Fig. 6



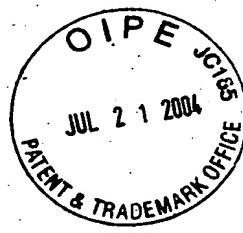


JUL 21 2004

7/14

Fig. 7A

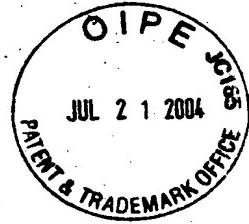
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	1/15/10	10:01 AM																			
2	Area F	2,400																			
3																					
4	Ibs of water	823,455																			
5	Qh Blu'shr	2,460,000																			
6																					
7	$\Delta T_h$	2.99																			
8	Altitude feet	2300																			
9																					
10																					
11																					
12																					
13																					
14	1/15/10	10:00 AM	0.0	90.0	55.0	45.0	31.4	34.1	0.10	70.0	22.0	0.07	-0.02	15.0	555	509	-0.01	-0.22	0.00	0.20	5.00
15	1/15/10	11:00 AM	1.0	90.0	55.0	45.0	31.4	34.1	0.10		25.4	0.08	-0.01	15.0	571	509	0.01	-0.20	0.00	0.20	5.15
16	1/15/10	12:00 PM	2.0	90.0	55.0	45.0	31.4	34.1	0.10		28.7	0.09	0.01	15.0	586	509	0.03	-0.18	0.00	0.20	5.30
17	1/15/10	1:00 PM	3.0	90.0	55.0	45.0	31.4	34.1	0.10		32.1	0.10	0.02	15.0	602	509	0.05	-0.15	0.00	0.20	5.45
18	1/15/10	2:00 PM	4.0	90.0	55.0	45.0	31.4	34.1	0.10		35.4	0.12	0.03	15.0	618	509	0.07	-0.13	0.00	0.20	5.60
19	1/15/10	3:00 PM	5.0	90.0	55.0	45.0	31.4	34.1	0.10		38.6	0.13	0.05	15.0	634	509	0.10	-0.11	0.00	0.20	5.75
20	1/15/10	4:00 PM	6.0	90.0	55.0	45.0	31.4	34.1	0.10		41.8	0.15	0.07	15.0	650	509	0.13	-0.08	0.00	0.20	5.90
21	1/15/10	5:00 PM	7.0	90.0	55.0	45.0	31.4	34.1	0.10		44.9	0.17	0.09	15.0	666	509	0.17	-0.06	0.00	0.20	6.05
22	1/15/10	6:00 PM	8.0	90.0	55.0	45.0	31.4	34.1	0.10		48.0	0.18	0.11	15.0	682	509	0.20	-0.03	0.00	0.20	6.20
23	1/15/10	7:00 PM	9.0	90.0	55.0	45.0	31.4	34.1	0.10		51.0	0.21	0.13	15.0	698	509	0.24	-0.01	0.00	0.20	6.35
24	1/15/10	8:00 PM	10.0	90.0	55.0	45.0	31.4	34.1	0.10		54.0	0.23	0.15	15.0	712	509	0.28	0.01	0.10	0.00	6.50
25	1/15/10	9:00 PM	11.0	90.0	55.0	45.0	31.4	34.1	0.10		56.5	0.25	0.17	15.0	726	509	0.33	0.04	0.10	0.00	6.65
26	1/15/10	10:00 PM	12.0	90.0	55.0	45.0	31.4	34.1	0.10		59.1	0.27	0.20	15.0	740	509	0.37	0.06	0.11	0.00	6.80
27	1/15/10	11:00 PM	13.0	90.0	55.0	45.0	31.4	34.1	0.10		61.5	0.29	0.22	15.0	753	509	0.42	0.08	0.12	0.00	6.95
28	1/15/10	12:00 PM	14.0	90.0	55.0	45.0	31.4	34.1	0.10		63.9	0.32	0.25	15.0	766	509	0.47	0.10	0.12	0.00	7.10
29	1/16/10	1:00 AM	15.0	90.0	55.0	45.0	31.4	34.1	0.10		66.2	0.34	0.27	15.0	779	509	0.53	0.13	0.13	0.00	7.25
30	1/16/10	2:00 AM	16.0	90.0	55.0	45.0	31.4	34.1	0.10		68.4	0.37	0.30	15.0	792	509	0.58	0.15	0.13	0.00	7.40
31	1/16/10	3:00 AM	17.0	90.0	55.0	45.0	31.4	34.1	0.10		70.5	0.40	0.33	15.0	804	509	0.64	0.17	0.14	0.00	7.55
32	1/16/10	4:00 AM	18.0	90.0	55.0	45.0	31.4	34.1	0.10		72.5	0.42	0.35	15.0	816	509	0.70	0.19	0.14	0.00	7.70
33	1/16/10	5:00 AM	19.0	90.0	55.0	45.0	31.4	34.1	0.10		74.5	0.45	0.38	15.0	827	509	0.77	0.21	0.15	0.00	7.85
34	1/16/10	6:00 AM	20.0	90.0	55.0	45.0	31.4	34.1	0.10		76.3	0.48	0.41	15.0	838	509	0.85	0.23	0.15	0.00	8.00
35	1/16/10	7:00 AM	21.0	90.0	55.0	45.0	31.4	34.1	0.10		78.1	0.51	0.45	15.0	850	509	0.86	0.25	0.00	0.00	8.15
36	1/16/10	8:00 AM	22.0	90.0	55.0	45.0	31.4	34.1	0.10		80.0	0.54	0.45	15.0	863	509	0.87	0.28	0.00	0.20	8.30
37	1/16/10	9:00 AM	23.0	90.0	55.0	45.0	31.4	34.1	0.10		82.0	0.54	0.45	15.0	863	509	0.90	0.00	0.00	0.00	8.45



8/14

Fig. 7B

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V		
1	1/16/10	9:01 AM																					
2	Area F2	2,400																					
3	0	0																					
4	lbs of water	823,455																					
5	Qh Bl'shr	2,460,000																					
6	0	0																					
7	ΔTh	2.99																					
8	Altitude feet	2300																					
9																							
10	sh5	Final nov 19																					
11																							
12																							
13	Vwf	Wmf	Ta	Rha	Note	Tdp	Pdp	Tm	Tc	Pw	Pdp	Qr	Qs	Δ En1						Vwa	[MPH]		
14	1	1/15/10	10:00 AM	0.0	90.0	55.0	45.0	31.4	34.1	0.1	64.5	22.0	0.29	0.17	0	160.782	-123.183	54.258	19,200	24,076	5,760	N/A	
15	1	1/15/10	11:00 AM	1.0	90.0	55.0	45.0	31.4	34.1	0.1	63.0	25.4	0.27	0.16	0	160.782	-123.183	49.720	15,600	22,063	4,680	N/A	
16	1	1/15/10	12:00 PM	2.0	90.0	55.0	45.0	31.4	34.1	0.1	61.5	26.7	0.26	0.15	0	160.782	-123.183	45.392	12,000	20,142	3,600	N/A	
17	1	1/15/10	1:00 PM	3.0	90.0	55.0	45.0	31.4	34.1	0.1	60.0	32.1	0.24	0.13	0	160.782	-123.183	41.265	8,400	18,311	2,520	N/A	
18	1	1/15/10	2:00 PM	4.0	90.0	55.0	45.0	31.4	34.1	0.1	58.5	35.4	0.23	0.12	0	160.782	-123.183	37.330	4,800	16,565	1,440	N/A	
19	1	1/15/10	3:00 PM	5.0	90.0	55.0	45.0	31.4	34.1	0.1	57.0	38.6	0.22	0.11	0	160.782	-123.183	37.330	1,200	16,565	360	N/A	
20	1	1/15/10	4:00 PM	6.0	90.0	55.0	45.0	31.4	34.1	0.1	55.5	41.8	0.21	0.11	0	160.782	-123.183	37.330	-2,400	16,565	-720	N/A	
21	1	1/15/10	5:00 PM	7.0	90.0	55.0	45.0	31.4	34.1	0.1	54.0	44.9	0.21	0.11	0	160.782	0	37.218	-2,400	16,515	-720	N/A	
22	1	1/15/10	6:00 PM	8.0	90.0	55.0	45.0	31.4	34.1	0.1	54.0	48.0	0.21	0.11	0	160.782	0	44.218	-2,400	19,581	-720	N/A	
23	1	1/15/10	7:00 PM	9.0	90.0	55.0	45.0	31.4	34.1	0.1	54.0	51.0	0.21	0.13	0	160.782	-36,063	51,413	-2,505	22,814	-752	N/A	
24	1	1/15/10	8:00 PM	10.0	90.0	55.0	45.0	31.4	34.1	0.1	54.0	54.0	0.23	0.15	81,047	0	2,134,485	59,054	3,716	26,205	1,115	6,65	
25	1	1/15/10	9:00 PM	11.0	90.0	55.0	45.0	31.4	34.1	0.1	56.5	56.5	0.25	0.17	86,193	0	2,074,826	67,027	9,763	29,742	2,929	6,80	
26	1	1/15/10	10:00 PM	12.0	90.0	55.0	45.0	31.4	34.1	0.1	59.1	59.1	0.27	0.20	91,246	0	2,012,980	75,300	15,630	33,414	4,689	6,95	
27	1	1/15/10	11:00 PM	13.0	90.0	55.0	45.0	31.4	34.1	0.1	61.5	61.5	0.29	0.22	96,193	0	1,949,084	83,841	21,311	37,203	6,393	7,10	
28	1	1/15/10	12:00 PM	14.0	90.0	55.0	45.0	31.4	34.1	0.1	63.9	63.9	0.32	0.25	101,025	0	1,883,304	92,609	26,800	41,094	8,040	7,25	
29	1	1/16/10	1:00 AM	15.0	90.0	55.0	45.0	31.4	34.1	0.1	66.2	66.2	0.34	0.27	105,730	0	1,815,827	101,563	32,092	45,067	9,628	7,40	
30	1	1/16/10	2:00 AM	16.0	90.0	55.0	45.0	31.4	34.1	0.1	68.4	68.4	0.37	0.30	110,300	0	1,746,857	110,639	37,183	49,103	11,155	7,55	
31	1	1/16/10	3:00 AM	17.0	90.0	55.0	45.0	31.4	34.1	0.1	70.5	70.5	0.40	0.33	114,727	0	1,676,764	119,816	42,070	53,167	12,621	7,70	
32	1	1/16/10	4:00 AM	18.0	90.0	55.0	45.0	31.4	34.1	0.1	72.5	72.5	0.42	0.35	118,988	0	1,606,963	128,930	46,751	57,211	14,025	7,85	
33	1	1/16/10	5:00 AM	19.0	90.0	55.0	45.0	31.4	34.1	0.1	74.5	74.5	0.45	0.38	123,054	0	1,529,460	139,192	51,209	61,765	15,363	8,00	
34	1	1/16/10	6:00 AM	20.0	90.0	55.0	45.0	31.4	34.1	0.1	76.3	76.3	0.48	0.41	127,443	0	1,444,660	150,960	55,420	66,987	16,625	8,15	
35	1	1/16/10	7:00 AM	21.0	90.0	55.0	45.0	31.4	34.1	0.1	78.1	78.1	0.51	0.45	0	0	1,543,856	150,960	59,919	66,987	17,976	8,30	
36	1	1/16/10	8:00 AM	22.0	90.0	55.0	45.0	31.4	34.1	0.1	80.0	80.0	0.54	0.45	0	0	160,782	1,674,639	150,960	64,800	66,987	19,440	8,45
37	1	1/16/10	9:00 AM	23.0	90.0	55.0	45.0	31.4	34.1	0.1	82.0	82.0	0.54	0.45	0	0	0	0	0	0	N/A		
36																			0.0	0.20			
37																			0.0	0.183			



9/14

Fig. 7C

A	B	C	D	E	F	G	H	I
1	sh6	Finalnov 19						
2	Vm	90	degrees					
3	Vmin(a)	5	mph					
4	WF(m)	0.15						
5								
6	Limit	10	mph					
7								
8			Vwa	Vwa	Vwa	Vwa	Vwc	
9		Vwf	[mph]	[mph]	[mph]	[mph]	Sum	
10	#	[mph]	a	b	c	d	Vwc	
11	0	0	5.0	5.0	5.0	5.0	25.0	5.0
12	0	1	5.2	5.2	5.2	5.2	25.8	5.2
13	0	2	5.3	5.3	5.3	5.3	26.5	5.3
14	0	3	5.5	5.5	5.5	5.5	27.3	5.5
15	0	4	5.6	5.6	5.6	5.6	28.0	5.6
16	0	5	5.8	5.8	5.8	5.8	28.8	5.8
17	0	6	5.9	5.9	5.9	5.9	29.5	5.9
18	0	7	6.1	6.1	6.1	6.1	30.3	6.1
19	0	8	6.2	6.2	6.2	6.2	31.0	6.2
20	0	9	6.4	6.4	6.4	6.4	31.8	6.4
21	0	10	6.5	6.5	6.5	6.5	32.5	6.5
22	0	12	6.8	6.8	6.8	6.8	34.0	6.8
23	0	14	7.1	7.1	7.1	7.1	35.5	7.1
24	0	16	7.4	7.4	7.4	7.4	37.0	7.4
25	0	18	7.7	7.7	7.7	7.7	38.5	7.7
26	0	20	8.0	8.0	8.0	8.0	40.0	8.0
27	0	22	8.3	8.3	8.3	8.3	41.5	8.3
28	0	24	8.6	8.6	8.6	8.6	43.0	8.6
29	0	26	8.9	8.9	8.9	8.9	44.5	8.9
30	0	28	9.2	9.2	9.2	9.2	46.0	9.2
31	0	30	9.5	9.5	9.5	9.5	47.5	9.5
32	0	32	9.8	9.8	9.8	9.8	49.0	9.8
33	0	34	10.1	10.1	10.1	10.1	50.5	10.1
34	0	36	10.4	10.4	10.4	10.4	52.0	10.4



10/14

Fig. 7D

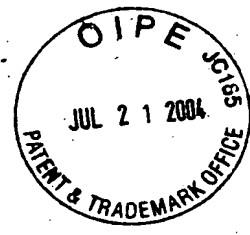
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	sh7														
2	Final nov 19														
3															
4	WBAB No.	12842													
5															
6															
7	Tilt °0	*37.2	24hr	24hr											
8	Month	kWh/m <sup>2</sup> /day	Bluf <sup>2</sup> /day	Clock	Hours	Bluf <sup>2</sup> /hr	Ap	Factor	Shade	Room	Daily	Daily	Clear	Qs	ΔTs
9	Jan	3.2	1015	7	19	12	85	2400	0.9	1	1	0.88	160,782	823,455	0.20
10	Feb	4.0	1269	7	19	12	106	2400	0.9	1	0	0	823,455	0.00	
11	Mar	5.1	1618	7	19	12	135	2400	0.9	1	0	0	823,455	0.00	
12	Apr	6.2	1967	7	19	12	164	2400	0.9	1	0	0	823,455	0.00	
13	May	6.4	2030	7	19	12	169	2400	0.9	1	0	0	823,455	0.00	
14	Jun	6.1	1935	7	19	12	161	2400	0.9	1	0	0	823,455	0.00	
15	Jul	5.8	1840	7	19	12	153	2400	0.9	1	0	0	823,455	0.00	
16	Aug	5.5	1745	7	19	12	145	2400	0.9	1	0	0	823,455	0.00	
17	Sep	4.9	1554	7	19	12	130	2400	0.9	1	0	0	823,455	0.00	
18	Nov	4.4	1396	7	19	12	116	2400	0.9	1	0	0	823,455	0.00	
19	Oct	3.6	1142	7	19	12	95	2400	0.9	1	0	0	823,455	0.00	
20	Dec	3.1	983	7	19	12	82	2400	0.9	1	0	0	823,455	0.00	



11/14

Fig. 7E

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Wx		Rise	Set		Open hr	9:00														
2	1/20/10	Sun	Hours	Hours		Closed hr	21:00														
3	Finanov 19		7	19		# hrs	12														
4																					
5																					
6																					
7	Hour	Day	Time	open																	
8	1	1	0:00	No	15	90	55	45	34.1	0								0	0	0	0
9	2	1	1:00	No	15	90	55	45	34.1	0								0	0	0	0
10	3	1	2:00	No	15	90	55	45	34.1	0								0	0	0	0
11	4	1	3:00	No	15	90	55	45	34.1	0								0	0	0	0
12	5	1	4:00	No	9	90	55	45	34.1	0								0	0	0	0
13	6	1	5:00	No	9	90	55	45	34.1	0								0	0	0	0
14	7	1	6:00	No	9	90	55	45	34.1	0								0	1	0	0
15	8	1	7:00	No	15	90	55	45	34.1	0								0	0	0	0
16	9	1	8:00	No	15	90	55	45	34.1	0								0	0	0	0
17	10	1	9:00	Yes	5	90	55	45	34.1	0								0	1	1	0.5
18	11	1	10:00	Yes	5	90	58	45	34.1	0								0	1	1	0.8
19	12	1	11:00	Yes	5	90	61	45	34.1	0								0	1	1	0.8
20	13	1	12:00	Yes	5	90	64	45	34.1	0								0	1	1	0.8
21	14	1	13:00	Yes	5	90	67	45	34.1	0								0	1	1	1.0
22	15	1	14:00	Yes	5	90	70	45	34.1	0								0	1	1	0.8
23	16	1	15:00	Yes	15	90	73	45	34.1	0								0	1	1	0.8
24	17	1	16:00	Yes	8	90	76	45	34.1	0								0	1	1	0.8
25	18	1	17:00	Yes	15	90	79	45	34.1	0								0	1	1	0.8
26	19	1	18:00	Yes	15	90	82	45	34.1	0								0	1	1	0.8
27	20	1	19:00	Yes	15	90	85	45	34.1	0								0	1	1	0.8
28	21	1	20:00	Yes	15	90	82	45	34.1	0								0	1	1	0.8
29	22	1	21:00	No	15	90	79	45	34.1	0								0	0	0	0
30	23	1	22:00	No	15	90	76	45	34.1	0								0	0	0	0
31	24	1	23:00	No	15	90	73	45	34.1	0								0	0	0	0
32																	Sum	113	852	0	120
33																	Avg	9	71	0	10
34																	Limit	10	70	80	
35																	Logic	1	1	1	1
																	Number	10.50			0.88



12/14

Fig. 7F



13/14

Fig. 7G

	A	B	C	D	E	F	G	H	I
1	Final nov 19								
2									
3									
4									
5									
6									
7	Time	#	mag.	Number	X-Y		Time	#	Winf
8	00:01 to 06:00	1	22.5	1			12:01 to 18:00	3	22.5
9	00:01 to 06:00	1	67.5	2			12:01 to 18:00	3	67.5
10	00:01 to 06:00	1	112.5	3			12:01 to 18:00	3	112.5
11	00:01 to 06:00	1	157.5	4			12:01 to 18:00	3	157.5
12	00:01 to 06:00	1	202.5	5			12:01 to 18:00	3	202.5
13	00:01 to 06:00	1	247.5	6			12:01 to 18:00	3	247.5
14	00:01 to 06:00	1	292.5	7			12:01 to 18:00	3	292.5
15	00:01 to 06:00	1	337.5	8			12:01 to 18:00	3	337.5
16									
17	06:01 to 12:00	2	22.5	9			18:01 to 00:00	4	22.5
18	06:01 to 12:00	2	67.5	10			18:01 to 00:00	4	67.5
19	06:01 to 12:00	2	112.5	11			18:01 to 00:00	4	112.5
20	06:01 to 12:00	2	157.5	12			18:01 to 00:00	4	157.5
21	06:01 to 12:00	2	202.5	13			18:01 to 00:00	4	202.5
22	06:01 to 12:00	2	247.5	14			18:01 to 00:00	4	247.5
23	06:01 to 12:00	2	292.5	15			18:01 to 00:00	4	292.5
24	06:01 to 12:00	2	337.5	16			18:01 to 00:00	4	337.5



14/14

Fig. 7H

	A	B
1	Finalnov 19	
2		
3		
4		
5	Wmf	
6	[DEG]	Vw Matrix
7	mag.	Number
8	22.5	1
9	67.5	2
10	112.5	3
11	157.5	4
12	202.5	5
13	247.5	6
14	292.5	7
15	337.5	8